

WHAT IS CLAIMED IS:

1. A method of intercepting a communication between two applications in a computer environment, the method comprising:

intercepting a data communication between a first application and a second application without changing the functionality of the first application and the second application;

providing a digital object created by the second application;

providing a control object capable of specifying an action depending on the data communication; and

performing the action specified by the control object on the digital object.

2. The method of Claim 1, wherein the first application and second applications communicate via a predefined communication channel.

3. The method of Claim 1, wherein the action comprises re-directing the data communication to a third application.

4. The method of Claim 1, wherein the action comprises monitoring the communication.

5. The method of Claim 4, wherein the monitoring action comprises auditing user actions taken on a digital object by recording the type of action and frequency of that action.

6. The method of Claim 4, wherein the monitoring action comprises computing the efficiency of the first application or the second application for performing certain user actions.

7. The method of Claim 1, wherein the action comprises augmenting information to the data communication.

8. The method of Claim 7, wherein the augmenting action comprises authorizing user access and use of the digital object.

9. The method of Claim 7, wherein the augmenting action comprises authorizing user access and use of the second application.

10. The method of Claim 7, wherein the augmenting action comprises activating purchase requirements for user access and use of the digital object including presenting a display screen whereby the user can (i) confirm a previous payment or (ii) purchase control rights for access and use of the digital object.

11. The method of Claim 7, wherein the augmenting action comprises activating purchase requirements for user access and use of the second application including presenting a display screen whereby the user can (i) confirm a previous payment or (ii) purchase control rights for access and use of the second application.

12. The method of Claim 7, wherein the augmenting action comprises displaying advertisements upon particular application communications.

13. The method of Claim 7, wherein the augmenting action comprises executing a help program on specific application communications.

14. The method of Claim 7, wherein the augmenting action comprises rendering audible or visual feedback to user actions implemented on the digital object or the second application.

15. The method of Claim 7, wherein the augmenting action comprises archiving a history of the user actions implemented on the digital object or the second application.

16. The method of Claim 7, wherein the augmenting action comprises customizing a user assistance program based on information related to the data

communication and collected by the control object, wherein the user assistance program can render audible or visual feedback to a user when one or more pre-defined user actions are repeated.

5           17.     A method of in-place editing by user action of digital objects created in a document server application in data communication with a hosting application, the method comprising:

              providing an intercept application which intercepts user actions sent from the hosting application;

10           providing an external control agent which monitors the user actions intercepted by the intercept application;

              registering the intercept application with an operating system;

              designating an application associated with the creation of the digital object as the document server application;

15           designating the intercept application as the active document server of the digital object;

              providing rules of usage of the digital object;

              activating the external control agent to open the digital object and to read the rules that are associated with the digital object;

20           sending in-place editing user actions from the intercept application to the external control agent whereby the in-place editing user actions are to be monitored by the external control agent; and

              opening of the digital object by the intercept application.

25           18.     The method of Claim 17, wherein the hosting application comprises an Internet browser application.

              19.     A method of embedding a control object into a hosting application as an interface to determine the control rights of a digital object, the method comprising:

30           providing a digital object created by a document server application in communication with the hosting application;

activating the control object to open the digital object and to read the control rights associated with the digital object;  
intercepting user actions by an intercept application;  
monitoring user actions intercepted by the intercept application by the control object; and  
authorizing a user to implement actions on the digital object according to the control rights.

20. The method of Claim 19, wherein the hosting application comprises an Internet browser application.

21. A system of embedding a control object into a hosting application as an interface to determine the control rights of a digital object and to monitor user actions, the system comprising:

a control object which monitors a plurality of user actions and authorizes implementation of the user actions on the digital object according to the control rights;

a hosting application which activates the control object to open the digital object and to read the control rights associated with the digital object;

a document server application associated with the creation of the digital object; and

an intercept application which mimics the functionality of the document server application and performs the user actions on the digital object.

22. A program storage device storing instructions for a computer perform the method comprising:

providing an intercept application which intercepts user actions sent from the hosting application;

providing an external control agent which monitors the user actions intercepted by the intercept application;

registering the intercept application with an operating system;

designating an application associated with the creation of the digital object as the document server application;

designating the intercept application as the active document server of the digital object;

providing rules of usage of the digital object;

activating the external control agent to open the digital object and to read the rules that are associated with the digital object;

sending in-place editing user actions from the intercept application to the external control agent whereby the in-place editing user actions are to be monitored by the external control agent; and

opening of the digital object by the intercept application.

23. The program storage device of Claim 22, wherein the hosting application comprises an Internet browser application.

24. A digital object comprising:

one or more content elements created by a first document server application;

a first application identifier that designates the first document server application which created the digital object; and

a second application identifier designating a control object to monitor communication between a second document server application and a hosting application.

25. The digital object of Claim 24, wherein the first document server application and the second document server application comprise the same version of a computer software application.

26. The digital object of Claim 24, wherein the one or more content elements are textual data elements.

27. The digital object of Claim 24, wherein the one or more content elements are graphical data elements.

5 28. The digital object of Claim 24, wherein the one or more content elements are audio data elements.

29. The digital object of Claim 24, further comprising control rights managed by the control object.

10 30. A computerized system for intercepting data communications between a first component and a second component, the computerized system comprising:

a sink interface that mimics an interface of the second component and receives at least one data communication from the first component;

a source interface that mimics an interface of the first component; and

15 a control object capable of specifying an action, depending on the data communication.

20